



# Java and Apple: State of the Union

**Session 400**





# Java and Apple: State of the Union

**Ted Goldstein**  
**Vice President of Development Technologies**

# Introduction

- Apple's Commitment to Java
- Java on Mac OS X
- Java at WWDC
- Java Roadmap



# Why Java at Apple?

- Java is Apple's cross-platform development strategy
  - Portable
  - Reliable
  - Secure
  - Popular
- Java works great on Mac OS X





*Mac OS X and Java—A Perfect Marriage*  
by Hitesh Seth

“

---

. . Dramatic shift in Apple’s strategy toward Java support in Mac OS could jump-start the deployment of Java-based applications and services on a user-friendly consumer operating system.

---

”





*Hot Java Revives Mac Programming*

by Peter Coffee

April 8, 2002

“

---

Apple has done a tremendous job of making Java code run well—really well—on the Mac, supporting such refinements as hardware graphics acceleration and anti-aliasing in a way that’s completely transparent to the programmer.

”



# Apple Drinks Our Own Java

- Apple Retail Store Point of Sale system
- iTools WebMail
- Apple Sales SAP Java Apps



# Java Compatibility



- Java apps just work
- Remove platform dependencies
- Mac OS X features for free



# Java in Every Box



- Sun's Java 2 Standard Edition 1.3.1 and HotSpot Client VM
- Develop and run pure Java applications
- Integrated with Web browsers





# Java Plug-in

- Applets in all browsers:
  - Internet Explorer
  - Mozilla
  - Others
- Features
  - Jar caching
  - Developer console
  - EMBED and OBJECT tags



# Mac OS X Optimizations

- First-class citizen
  - Aqua look & feel
  - Double-clickable applications
- Sharing technology for reduced memory footprint
- Java graphics for quality and speed
  - Quartz-based Java2D
  - OpenGL hardware-acceleration





# ThinkFree and GetAmped Demo

**Alan Samuel**  
**Java Evangelist**

# Why Use Java on Mac OS X

- Extremely productive
- Thousands of frameworks and reusable components
- Sampling of great third-party tools:

**Borland's JBuilder, Optimizeit**

**IntelliJ IDEA**

**Sun's NetBeans**

**IBM's Eclipse**

**Metrowerks' CodeWarrior**





**InstallAnywhere**

Demo

**Deven Poolman**  
**InstallAnywhere Product Manager**



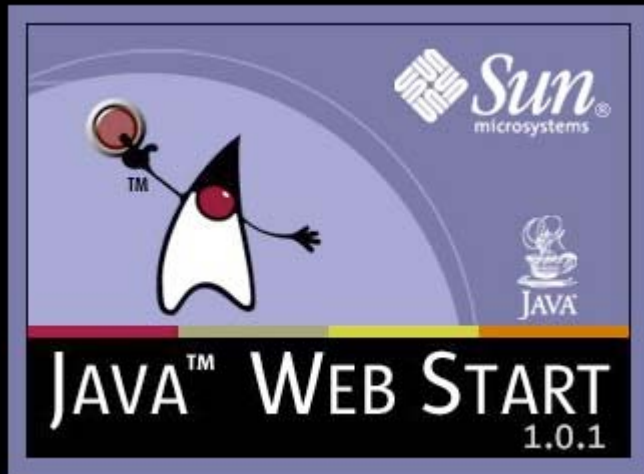


# Tekadence Magik Demo

**Pete Deemer**  
CEO

**Jared Kaplan**  
**Sean Allen**  
Tekadence Engineers

# Beyond J2SE 1.3.1



- J2SE 1.4 Features
  - Java Web Start
  - Java Secure Sockets Extension
- Apple Technologies
  - Project Builder
  - Bridge to Apple Cocoa frameworks
  - QuickTime for Java





# Java on Mac OS X Server



- Apache Tomcat included
- HotSpot VM tuned for server apps in Jaguar
- Third-Party J2EE servers
  - Pramati, Lutris, JBoss, Orion, Trifork
- Many other J2EE app servers “just work”
- WebObjects





Toni Trujillo Vian

**Director, WebObjects Engineering  
Apple Computer, Inc.**

# WebObjects

- What is it?
  - Apple's best kept secret
- Everything you need to create 3-tier apps
  - IDE
  - Database mapping
  - Page layout and GUI design



# Enterprise Objects Framework

- Object relational mapping
- Connect to databases and directory services
- EOF generates SQL for you



# Code Free Development

- Rapid development
  - Rule-based using database model
- Supports most common application types
  - Direct to Web
  - Direct to Web Services
  - Direct to Java Client

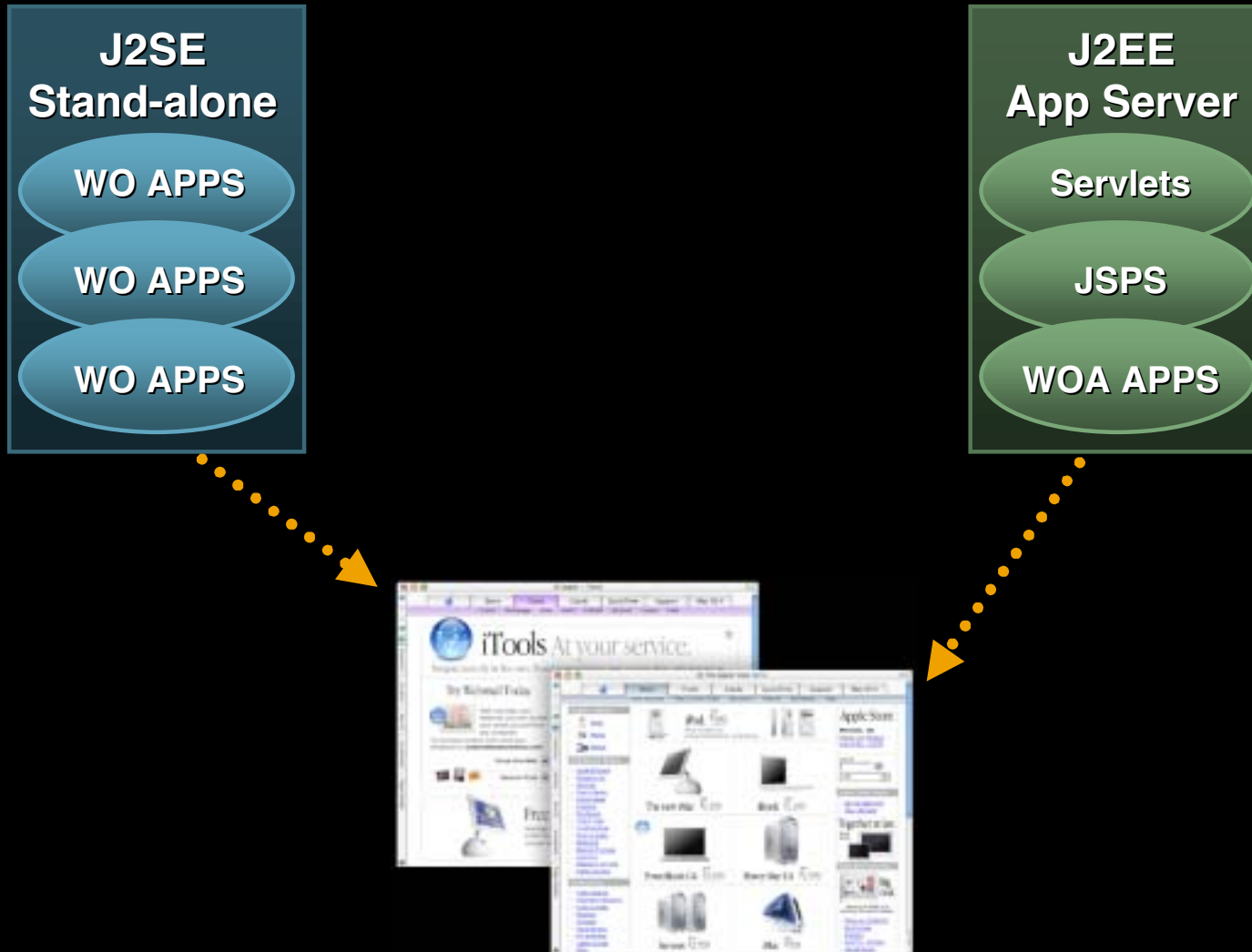




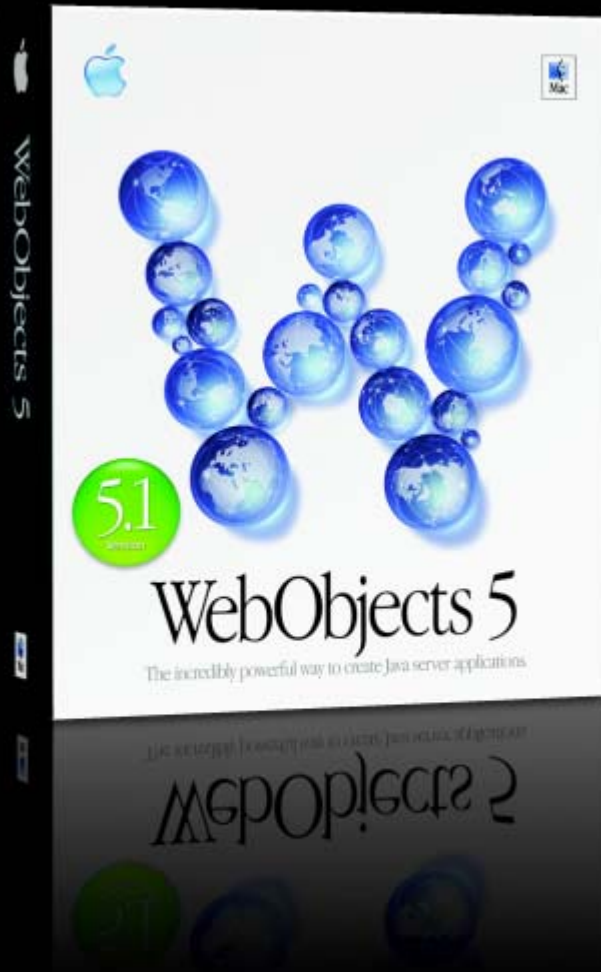
# 2-Tier Java Client Demo

**Andreas Wendker**  
**Manager, WebObjects Rapid Development**

# Flexible Deployment



# WebObjects Product



- Ships as stand-alone product
- Bundled with Mac OS X Server





# WebObjects Intro Sessions

---

**700 WebObjects: State of the Union**

Room A1  
**Tues., 9:00am**

---

**701 WebObjects Technical Overview**

Room A1  
**Tues., 10:30am**

---

**702 Introduction to WebObjects Tools**

Room A1  
**Tues., 2:00pm**

---

**703 Introduction to EOF**

Room A1  
**Tues., 3:30pm**

---

**705 WebObjects and Web Services**

Room A1  
**Wed., 2:00pm**



# Raising the Bar on Java

- Faster startup times
- Better fidelity with Aqua
- Use less memory
- Better tracking to Sun's release schedule
- Better integration with the desktop

Cost: Delay 1.4x until we can shift the foundation of Java from Carbon to Cocoa



# The Road to 1.4

- Developer Preview release today
  - 1.4.0 VM with 1.3.1 UI classes
  - Begin support for dual VMs
- Beta later in the year
  - 1.4.x VM with 1.4.x UI classes
- Timing of final release is based on your feedback!





One More Thing . . .



James Gosling

**Vice President and Fellow  
Sun Microsystems, Inc.**

# Roadmap

---

**401 Java Graphics**

Civic  
**Tues., 10:30am**

---

**402 J2SE Mac OS X Platform  
Overview**

Hall 2  
**Tues., 2:00pm**

---

**403 Java in the Browser**

Room C  
**Tues., 3:30pm**

---

**404 Tailoring Java Applications  
for Mac OS X**

Room J  
**Tues., 5:00pm**

---

**405 Java Web Services**

Room C  
**Wed., 10:30am**



# Roadmap

---

**406 Java Virtual Machine Internals**

Room C  
**Wed., 3:30pm**

---

**407 Java Performance**

Room C  
**Fri., 9:00am**

---

**408 QuickTime for Java Overview**

Room C  
**Fri., 10:30am**

---

**FF003 Java Feedback Forum**

Room J1  
**Wed., 5:00pm**

---

**Java/WebObjects Lab**

Room L  
**All week**



# Who to Contact

---

**Alan Samuel**

Java Technologies Evangelist

**[bluker1@apple.com](mailto:bluker1@apple.com)**

---

<http://developer.apple.com/wwdc2002/urls.html>





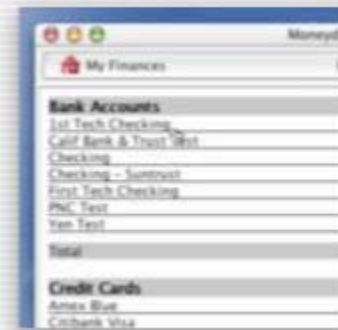
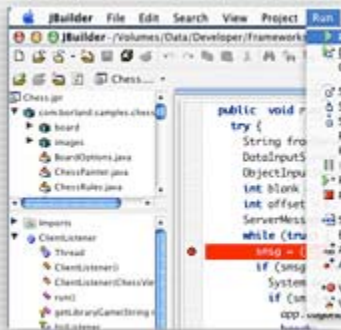
# How to Access Documentation

- Most up-to-date: PDF and HTML  
<http://developer.apple.com/techpubs/java>
- Hardcopy print-on-demand  
[Vervante.com](http://Vervante.com) **under Related Resources**
- Product CD  
**Documents folder and installed in**  
[/Developer/Documentation/Java](#)
- Check ADC News for latest updates  
<http://developer.apple.com/devnews>





# Q&A



**Alan Samuel**  
**Java Technologies Evangelist**  
**bluker1@apple.com**

<http://developer.apple.com/wwdc2002/urls.html>

 **WWDC2002**

 **WWDC2002**

 **WWDC2002**